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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,554	06/02/2006	Akihiro Taniguchi	043890-0791	6219
53080 7590 03/05/2010 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, NW WASHINGTON, DC 20005-3096			EXAMINER TORRES RUIZ, JOHALI ALEJANDRA	
			ART UNIT 2858	PAPER NUMBER
			MAIL DATE 03/05/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,554	Applicant(s) TANIGUCHI ET AL.	
	Examiner JOHALI A. TORRES RUIZ	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 22, 2010 has been entered.
2. Claims 1-2, 4-5 and 7-11 are pending.
3. Claims 3 and 6 have been cancelled by applicant.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2858

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 4-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al. (U.S. Publication Number 2003/0178968) and Iwaizono et al. (U.S. Patent Number 6,714,882).

7. Claims 1 and 9-10: Sakakibara teaches a notification portion (44); a power supply (58) for feeding at least the notification portion (44) (Fig.6); a temperature detection portion (47) for detecting a temperature of the power supply (58); a voltage detection portion (43) for detecting a voltage of the power supply (58) (Par.63); a memory portion for storing the temperature and a variety of voltages (Par.64 and 91); and a forced discharge portion (42) for recognizing an abnormality of the power supply and for forcedly discharging the power supply until the voltage of the power supply (58) detected by the voltage detection portion reaches a predetermined voltage (Par.68), and for electrifying the notification portion (44) by the power supply, thereby making the notification portion (44b) continuously notify a message indicating that the abnormality is being avoided while the power supply (58) is forcedly being discharged (Par.59) wherein the forced discharge portion includes a control portion (41) configured to make the memory portion store data indicating that forced discharge is completed when the forced discharge is completed (Par.69), and to make the notification portion notify a message indicating that the abnormality is avoided (Par.61).

Sakakibara does not explicitly teach the power supply includes a lithium-ion secondary battery; and a forced discharge portion recognizes an abnormality of the

Art Unit: 2858

power supply when the temperature of the power supply detected by the temperature detection portion is not lower than a first temperature and the voltage of the power supply detected by the voltage detection portion is not lower than a first voltage in a state in which a power feed from the power supply to the portable equipment is off, for forcibly discharging the power supply until the voltage of the power supply detected by the voltage detection portion reaches a second voltage smaller than the first voltage; and to turn-on the power feed from the power supply to a portable equipment, based on the data indicating that the forced discharge is completed.

Iwaizono teaches a power supply system including a lithium-ion secondary battery (10) (Col.4, Lines 33-34); a temperature detection portion (52) for detecting a temperature of the power supply (10) (Col.5, Lines 8-9); a voltage detection portion (48) for detecting a voltage of the power supply (10) (Col.7, Lines 33-36); and a forced discharge portion for recognizing an abnormality of the power supply when the temperature of the power supply detected by the temperature detection portion is not lower than the first temperature (Col.8, Lines 13-15) and the voltage of the power supply detected by the voltage detection portion is not lower than the first voltage (Col.8, Lines 11-13) and for forcibly discharging the power supply until the voltage of the power supply detected by the voltage detection portion reaches the second voltage (Col.8, Lines 16-17) in a state where the power supply to a portable equipment is off (Col.9, Lines 40-46); and to turn-on the power feed from the power supply (10) to a portable equipment, based on the data indicating that the forced discharge is completed (Col.4, Lines 62-63) (Col.7, Lines 62-67) (Col.8, Lines 1-2), the power is turned on when the

Art Unit: 2858

temperature and voltage are within a predetermined threshold which will occur after a forced discharge.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Iwaizono in the device of Sakakibara to have prevented swelling of the power supply and deterioration of a life cycle (Col.10, Lines 6-11).

8. Claim 4: Sakakibara and Iwaizono teach the limitations of claim 1 as discussed above. Sakakibara teaches the forced discharge portion further includes a switch (48) involved in the power feed from the power supply to a portable equipment; and the control portion (41) is configured to turn on the switch (48) when an abnormality of the power supply (58) is recognized (Par.68).

9. Claim 5: Sakakibara and Iwaizono teach the limitations of claim 4 as discussed above. Sakakibara teaches the control portion turns off the switch (48) when the voltage of the power supply detected by the voltage detection portion reaches a predetermined voltage after forcibly discharging (Par.68).

10 Claim 11: Sakakibara and Iwaizono teach the limitations of claim 10 as discussed above. Sakakibara teaches a voltage detection portion (27) integrated with an equipment circuit (30) (Fig.6).

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al. (U.S. Publication Number 2003/0178968) and Iwaizono et al. (U.S. Patent Number 6,714,882) as applied to claim 1 above, and further in view of Fasen (U.S. Patent Number 4,609,860).

Art Unit: 2858

12. Claim 2: Sakakibara and Iwaizono teach the limitations of claim 1 as discussed above. Sakakibara teaches tuning on a display (44b) when an abnormality of the power supply is recognized and turning off the display (44b) when the voltage of the power supply detected by the voltage detection portion reaches the predetermined voltage (Par.59 and 68).

Sakakibara does not explicitly teach a switch coupled in series with the notification portion and coupled to the power supply together with the notification portion, and the control portion is configured to turn on and off the switch.

Fasen teaches a switch (64) coupled in series with a notification portion (65) and coupled to a power supply (14) together with the notification portion (65), and a control portion (62) is configured to turn on and off the switch (64) (Col.5, Lines 61-68) (Col.6, Lines 1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Fasen in the device of Sakakibara to have had activated the notification portion with the passages current from the power supply (Col.5, Lines 61-68) (Col.6, Lines 1-2).

13. Claims 7- 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakakibara et al. (U.S. Publication Number 2003/0178968) and Iwaizono et al. (U.S. Patent Number 6,714,882) as applied to claim 1 above, and further in view of Yoshida et al. (U.S. Publication Number 2005/0106455).

Art Unit: 2858

14. Claim 7: Sakakibara and Iwaizono teach the limitations of claim 1 as discussed above. They do not explicitly teach an active material of a positive electrode of the lithium-ion secondary battery comprises nickel complex oxide.

Yoshida teaches an active material of a positive electrode of a lithium-ion secondary battery comprises nickel complex oxide (Par.3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have had the teachings of Yoshida in the combination of Sakakibara and Iwaizono to have obtain a battery with excellent cycle life and safety (Par.3).

15. Claim 8: Sakakibara, Iwaizono, and Yoshida teach the limitations of claim 7 as discussed above. Iwaizono teaches the second voltage is not lower than 3.85V and not higher than 3.95V for each lithium-ion secondary battery (Col.8, Lines 16-17).

Iwaizono teaches forcibly discharging when the temperature is equal to or greater than 35°C and the voltage is equal or greater than 4V (Col.8, Lines 11-14).

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. MPEP 2131.03

A temperature greater than 35°C allows for a temperature between 55°C and 65°C; and voltage greater than 4V allows for a voltage between 4.05V and 4.15V.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHALI A. TORRES RUIZ whose telephone number is (571)270-1262. The examiner can normally be reached on M- F 9:30am-6pm EST.

Art Unit: 2858

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. A. T./
Examiner, Art Unit 2858

/Patrick J Assouad/

Supervisory Patent Examiner, Art Unit 2858